APPENDIX D

MINIMUM TOOL AUTHORIZATION ANALYSIS AND REQUEST

1) DIRECTOR APPROVAL
2) STAFF ANALYSIS

State of California – The Resources Agency

Memorandum

Date : July 29, 2009

To : Anthony I. Perez
Deputy Director, Park Operations
California State Parks

From : Ron Krueper
District Superintendent
Inland Empire District

Subject : Approval to Proceed: Round Valley Meadow/Stream Headcut Repair & Elevation Restoration Project, Mount San Jacinto State Park Wilderness

The California Department of Parks and Recreation has promulgated Regulations in response to enactment of Assembly Bill 2945 (Chapter 689 of 2008). Consistent with and pursuant to the recent Amendment to the California Code of Regulations Title 14 Division 3 Chapter 2 §4351.1(b), I request that you make findings that the Round Valley Headcut Repair and Elevation Restoration Project, within the State Wilderness of Mount San Jacinto State Park, is a Minimum Management Requirement. This project is briefly described below. Staff analysis to support such findings, prepared in conformance with Public Resources Code §4351.1(c), is attached. I have also attached my approval of this project in conformance with Department Operations Manual Section 0304.5.4.

A project is required to stop the continuing, unnatural erosion of the stream through the meadow, which threatens to down-cut further through and cause drying of virtually the entire Round Valley Meadow. A restoration of the degraded lower portion of Round Valley Meadow will be accomplished by borrowing nearby (on-site) native soil material to fill a gully created by past disturbance of the seasonal unnamed stream draining the meadow. The stream will be restored to a stable, natural course at its natural meadow surface elevation. The affected reach of meadow and stream totals about 300 feet in length and covers about 1/4-acre. Borrowed material will come from two nearby upland and depositional sites, one just under 1/10-acre and the other slightly over 1/3-acre; these areas will be stripped of an average of 12-14 inches of topsoil and the resultant 700-800 cubic yards of material will be used to fill the gully and restore natural meadow grade.

Excavation of the borrow areas and transport of material to the fill site will be accomplished using a Skidsteer or equivalent, a small backhoe-loader. The use of two such pieces of equipment will be required. This motorized equipment will be delivered to the Wilderness worksite, and later removed, by helicopter airlift. Compacting of fill material, salvage/harvest of logs and other large woody debris for construction of grade control structures, construction of short sections of log-rail fence, disposal of surplus woody debris (slash) by burning in small piles, and other hand

labor will be performed by California Conservation Corps crews during 3 extended backcountry "spike" assignments, each expected to be 10 days in duration. The CCC crews will use hand tools (shovels, McLeods, etc.) and power tools (chain saws, compactors, weed-whackers), and will camp in existing primitive campsites near the worksite. Disturbed areas will be restored to a natural topographic appearance, and revegetated with native vegetation.

As Deputy Director of California State Parks, I have fairly and objectively reviewed the attached staff analysis and evaluation, and I find that a Minimum Management Requirement exists to implement the Round Valley Headcut Repair and Elevation Restoration Project, within the State Wilderness of Mount San Jacinto State Park. Therefore, by signature below, I authorize the implementation of this project as described above. I make these findings pursuant to the California Public Resources Code §4351.1(b).

Anthony I. Perez
Deputy Director, Park Operations

Date: 7-30-09

Attachments

MEMORANDUM

STATE OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
CENTRAL VALLEY DISTRICT

DATE: **June 18, 2009**

TO: **Ron Krueper, District Superintendent**
Inland Empire District

FROM: **Doug Rischbieter**
Calaveras Big Trees State Park

SUBJECT: **Staff Recommendation: Minimum Tool Analysis for Round Valley Meadow Restoration**

INTRODUCTION: The Department is proposing a restoration project in Inland Empire District, within the Mount San Jacinto State Wilderness of Mount San Jacinto State Park. I have completed an analysis for the project described below, and recommend it be undertaken in September, 2009, consistent with Public Resources Code §4351.1(c). The approval of the Director is required pursuant to PRC §4351.1(b).

SUMMARY: Round Valley comprises about 7 acres of extraordinarily sensitive habitat within 13,770-acre Mount San Jacinto State Park. It is also within the 9,900-acre Mount San Jacinto State Wilderness. A project is required to stop the continuing, unnatural erosion of the stream through the meadow, which threatens to down-cut further through and cause drying of virtually the entire Round Valley Meadow. A restoration of the degraded lower portion of Round Valley Meadow will be accomplished by borrowing nearby (on-site) native soil material to fill a gully created by past disturbance of the seasonal unnamed stream draining the meadow. The stream will be restored to a stable, natural course at its natural meadow surface elevation. Restoration of natural hydrologic function at this site will help preserve this fragile resource for future generations; rehabilitation of borrow areas and revegetation of the restored area is expected to restore natural appearance of this and the post-project appearance of the site will be indistinguishable from undisturbed areas.

MANAGEMENT NEED: The Round Valley Meadow is an exceedingly uncommon and fragile wetland habitat, made all the more rare by its isolation high above the Southern California desert. This meadow, and the meadow's seasonal stream, exhibit evidence of human-caused disturbances that have resulted in an unnatural and unstable erosional feature: a series of headcuts and "nick-points" that are prone to continue receding up-meadow and downcutting through the fragile meadow soils. Hamilton (1983) describes the outcome of this process occurring in nearby Tahquitz meadow: an inevitable drying trend resulting from gully erosion. Such drying trends inevitably and often irreparably alter vegetation patterns, with local extinction of fragile wetland plants as hydrologic conditions become unsuitable and they are displaced by upland species.

Left unchecked, progressive erosion and headcutting of the now-confined, channelized, and lowered stream will cause a resultant lowering of the watertable. Once the meadow is unnaturally dried in this fashion, it will allow invasion by upland plants and its wetland character and habitat will be greatly and permanently diminished. This project will restore the natural wetland and streamside elevations, eliminate the headcut and concentrated streamflow, and discourage future volunteer trails through signage and split-rail or pole-fencing at the most critical points.

Currently, a unnatural concentration of surface flow continues to accelerate erosion of the meadow's fragile soil, and has opened a deep rent in the wetland, soil, and subsoil and the meadow's eastern (downstream) end. This scouring erosion, which has created a series of headcuts in a gully up to 10 feet deep, is poised to continue westward and upslope. In the upstream and intermediate reaches of the gully, "cantilevered blocks" can be seen in various states of detachment (Micheli and Kirchner 2002). Though the process of failure of a single block can take years in a wet

meadow, and the gully has advanced headward only a few feet in recent decades, there is no sign that this process is stabilizing or reversing in Round Valley. The largest nick-point is presently temporarily arrested in the roots of encroaching conifers, but once these roots are undermined the erosion will accelerate and the damage will be irreparable. In 2002, the restoration of Mount San Jacinto State Park hydrologic resources, including the Round Valley Meadow, was identified and adopted as a goal of the Mount San Jacinto State Park General Plan (DPR 2002).

Cooper and Wolf (2009) also documented dramatic and inexorable ongoing changes to the wetland vegetation of Round Valley Meadow over recent decades, and made recommendations that could arrest and reverse these trends that are continuing to degrade this fragile and rare meadow resource.

MINIMUM REQUIRED MANAGEMENT ACTIONS: The modern accepted treatment for eroding gullies is to either attempt stabilization by construction of structures to deter future erosion, or to fill the gully in a manner that restores native grade and enables the continuation of natural hydrologic and vegetative processes. The former is a method of temporary nature, though it has long-term maintenance requirements and other impacts; the latter is envisioned as a permanent solution to the problem, with impacts limited to the construction period and perhaps the revegetation process in the following growing season.

In this Wilderness context, filling the gully, and restoring natural grade and hydrologic processes, is the necessary and recommended Minimum Management Requirement. The impacts of such a project are short-term and mostly limited to the construction period. The post-project restored site will persist with little if any need for maintenance work -- the results of the work will be preserved but natural hydrologic and vegetative processes and function. The restored site will be of a natural appearance, reminiscent of the pre-disturbance condition, and is in this fashion more appropriate in a Wilderness setting than would be an alternative project of construction and periodic maintenance of structures. The latter approach also is insufficient because it would only help prevent the existing problems becoming worse, it would not correct the problem or past damage.

MINIMUM TOOL ASSESSMENT: While the downcutting and eroded area has not yet advanced to a point where repair is impossible, it nevertheless requires work of a scale not feasibly accomplished with hand labor alone. These techniques proposed to be used for stream and meadow grade restoration, though relatively innovative and uncommon, have been successfully implemented on a similar scale in a meadow in Calaveras Big Trees State Park (Rischbieter 1999) and in several other Northern California watershed restoration projects.

Specifically, this project requires placement of about 800 cubic yards of fill material into the eroded gully at the foot of Round Valley. Almost all of this material should consist of compactable native soil, to attain complete natural appearance and vegetative regrowth, but placement of this soil at the points needed is hampered by the following constraints:

- Unlike previous State Park projects of this type, it is not possible to import hundreds of tons of fill dirt to this remote Wilderness location or access the site by wheeled vehicle;
- The nearest source of suitable fill material in adequate volume is about 400 feet away from the gully, and requires excavation and hauling and compaction for stable, permanent placement;
- Proper construction techniques and Best Management Practices dictate that the work should be accomplished when the gully is dry or nearly-dry, a situation that does not occur until late-summer at Round Valley;
- All work, including fill placement, regrading, surface stabilization, and initial revegetation must be accomplished before seasonally inclement and winter weather conditions become likely at the site, normally mid-fall;
- The project cannot span two work seasons, because a disturbed, half-repaired gully site would be at high risk for additional failure and unacceptable water quality and other resource impacts during high flows likely during periods of accelerated snowmelt;

- Because of the remoteness of the site, and the large number of workdays required but confined within the few-week period described above, workers on this project must be available to camp at the worksite to avoid unnecessary daily recurrence of the several hours necessary to travel to/from the worksite;

- The capacity of the Wilderness campsites near the project site cannot reasonably accommodate more than about two dozen crew and staff at one time, without noticeable impacts to resources and public use of the area;

- Because the duration of the project of this scale is necessarily several weeks, it is preferable to conduct the work during a season when it has the least impact to Park visitors and their expectation of a Wilderness experience, and to minimize the duration for the same reason.

Excavating, moving, and carefully placing 800 cubic yards of soil between points 400 feet apart using hand tools, such as shovels and wheelbarrows, is not feasible with a reasonable-size crew – even two crews totaling 24 workers. With wheelbarrows each loaded with 0.1 cubic yard, 20 workdays (more than 3 weeks) would require 400 wheelbarrow loads/trips each day just to be loaded and moved – over 60 per hour – even without consideration of the need for crewmembers to place and compact the fill, or the work involved to reclaim and revegetate the disturbed areas. Between the post-holiday (Labor Day) commencement of this project, there are not a sufficient number of weeks before the likelihood of winter weather arrives to complete this work by hand. Instead, successful completion of this project will require the use of mechanized equipment (two small backhoe-loaders) to excavate and move the fill material, and to help the crews compact and stabilize it. Since there is no road access for wheeled vehicles to the site, and the mechanized equipment is too large to disassemble and carry on foot, an airlift (via helicopter) is the only means by which to deliver and remove equipment at this remote Wilderness site.

MEASURES TAKEN TO MINIMIZE IMPACTS: The construction window for this project would be an approximately 30-day period beginning on or about September 10, 2009. All rehabilitation work of disturbed areas is also expected to be completed by the end of the 30-day period. Work is scheduled for this season because day and overnight Wilderness use diminishes dramatically in late summer and early fall, and nominally moreso in advance of and following Labor Day Weekend. Also, while annual attendance at Mount San Jacinto State Park averages about 375,000 visitors per year, only about 20,000 (5%) actually venture into the State Wilderness. The proposed work schedule also coincides with a scheduled closure of the Palm Springs Aerial Tramway: this primary access route to the Wilderness is scheduled to be shut-down, for seasonal maintenance, from September 12 through 25, 2009. This is another circumstance that allows this project to proceed with a minimum impact to Park visitors.

All work would be limited to the hours between 7:30 a.m. and 5:30 p.m., up to 7 days a week. Areas around the construction site would be barricaded off, as necessary, to deter unsafe public access, but no closures to public use of the Park, meadow, or most surrounding campsites would be necessary. Inconvenience to the public would be negligible, but the noise of motorized equipment operating will contrast will normal public expectation of peaceful Wilderness experience during these daytime hours.

Other project circumstances contribute to minimizing and avoiding impacts. Project timing also minimizes project impacts because instream work will be done when the seasonal stream at the project site is dry or nearly dry. At project completion, disturbed areas, including borrow areas, will be regraded to mimic the natural topography and rehabilitated through scatter of leaf-litter and revegetation. Revegetation will be primarily accomplished through planting of up to 4,500 plugs of native meadow species, including *Carex* spp., that have been salvaged from the bottom of the existing gully before filling occurs. The replanting objective will be 4 sod plugs per square yard (Cooper and Wolf 2009); bare areas between replanted plugs will be protected from erosion by scattering of native thatch harvested from dispersed areas of the meadow (this native thatch will also include a seed-load that will contribute to revegetation the following spring). If a sufficient number of sod plugs cannot be salvaged on-site, seed-heads from meadow plants will be harvested by hand, and seeds germinated and raised in a local nursery to allow additional replanting to occur the following spring.

The route followed by the backhoe-loaders, between the borrow areas and the fill site, may require scarification (with hand tools) and mulching with leaf-litter, if significant topsoil compaction occurs. Limbs and "slash" that may be byproducts of trees and logs used for the project also will be used as scatter for erosion control in a manner of

natural appearance; excess limbs and slash (if any) may be chipped with a small garden-sized power chipper, or burned near the worksite in small piles under the terms and conditions of a local burning permit.

FOLLOW-UP ACTIONS: Post-project monitoring will follow the steps outlined in a Mitigation and Monitoring Plan adopted by the Department as part of its California Environmental Quality Act filing and compliance. The Mitigation and Monitoring Plan will also be incorporated into the Clean Water Act 401 Water Quality Certification to be issued to the Department by the Regional Water Quality Control Board. It will include monitoring of revegetation success and site stability, and additional planting efforts if necessary, for a period enduring at least 5 years following project completion.

CONCLUSION: It is an objective of this project that the Wilderness setting will bear no lasting evidence of the disturbances undertaken for project implementation. The site will be subject to, and perpetually maintained by, natural hydrologic and vegetative processes and functions. The entirety of the circumstances of this project meet criteria outlined in the Department Operations Manual Section 0304.5.4:

1) Reasonable alternatives to the use of mechanized equipment, for the purpose of excavating, moving, and compacting about 800 yards of soil over a distance of several hundred feet, within a reasonable timeframe, do not exist;

2) A significant resource management need exists, being the inevitable major future erosional damage predicted to occur in Round Valley, and the result of the work will be substantially unnoticed (owing to topographic restoration of natural-appearing grade, and revegetation);

3) The use of this mechanized equipment will be non-recurring, and is limited in time and area to the minimum necessary; and

4) The District Superintendent will provide prior written approval, assuring that the above requirements are met.

The foregoing analysis has been prepared to support a recommendation to the Director that we proceed to implement the Round Valley Headcut Repair and Elevation Restoration Project at Mount San Jacinto State Park. This project requires an exception to the prohibition of motorized equipment in State Wilderness, to be authorized pursuant to Public Resources Code 4351.1(b). These recommendations are made consistent with PRC 4351.1(c), and are consistent with the provisions of DPR's Department Operations Manual (DOM), Section 0304.5.4. Based on the circumstances and analysis discussed above, I request that you recommend to the Director that approval be issued pursuant to PRC §4351.1(b), to conduct and implement the Round Valley Headcut Repair and Elevation Restoration Project following completion of public review pursuant to CEQA and after securing other necessary environmental permits.

If you have any questions or require additional information, please call me at (209) 795-3488.

cc: Garratt Aitchison, San Jacinto Sector
Wayne Harrison, Central Valley District
Rick Rayburn, Resource Management Division
Keith Demetrak, Resource Management Division

APPENDIX E

PUBLIC COMMENT LETTER AND REPLY

1) MS. JANE UDALL

State of California • The Resources Agency
Arnold Schwarzenegger, *Governor*

DEPARTMENT OF PARKS AND RECREATION
Ruth Coleman, *Director*

Inland Empire District
17801 Lake Perris Drive
Perris, CA 92571
(951) 443-2423

July 28, 2009

Ms. Jane Udall
[redacted]
Rancho Mirage, CA 92270

Subject: Round Valley Meadow/Stream Headcut Repair & Elevation Restoration Project
Mount San Jacinto State Park

Dear Ms. Udall;

Thank you for your letter of June 24, 2009, commenting on our proposed Round Valley Meadow and Stream Headcut Repair and Elevation Restoration Project.
California State Parks agrees that erosion can be a natural process, however, two hydrologists determined, through careful study and site evaluation, that the severe erosion at the foot of Round Valley is not a natural feature. The circumstances that likely led to unnaturally-accelerated erosion, and the risk this poses to the integrity of the Round Valley meadow and associated wetland habitat, is described in Section 2.3 (page 5) of the Mitigated Negative Declaration.

As described in the document, California State Parks evaluated the possible impacts from our proposed restoration work in State Wilderness. California State Parks will minimize and ensure that the disturbance from this work will be as short-lived and affect as few Park visitors as possible. Toward that end the work is scheduled during a period that includes a routine maintenance shut-down of the Palm Springs Aerial Tramway and will be undertaken in September that typically sees the fewer Park visitors. California State Parks has committed to restoring the project site to a natural condition that will be indistinguishable from surrounding areas and secured professional advice that supports the future benefits this project will have to the ecosystem and natural hydrologic function of Round Valley. However, because of the scale and short timeline available for project construction, this project will require the efforts of both a labor crew and some mechanized equipment to be operated by State Park staff.

Lastly, despite the current State Budget problems, California State Parks is the trustee agency for many of California's most precious resources. Funding from this project will come from annually budgeted Natural Stewardship funding. Statewide criterion to identify and prioritize natural resource projects placed the importance of saving the Round Valley meadow and wetland above many other needed projects in the State Park system.

Again, thank you for your interest in and support for Mount San Jacinto State Park. I hope you will agree that we have prudently planned this project to help fulfill our Mission of preserving the best of California for future generations. If you have any additional questions, please feel free to contact at (951) 443-2423.

Sincerely,

Ron Krueper

Ron Krueper
District Superintendent
Inland Empire District

June 24, 2009

Ron Krueper, District Superintendent
Inland Empire District
California State Parks
17801 Lake Perris Dr.
Perris, CA 92571-9293

RE: Mt. San Jacinto State Park

Dear Superintendent Krueper:

I read a public notice in the local newspaper about a proposal to make improvements to Round Valley in Mt. San Jacinto State Park. I am writing in opposition to the plan.

I am a regular user of the park; I have an annual tram pass that enables me to access the park easily all year round from my home in Rancho Mirage. I have hiked all the trails in the park many times by myself, with friends, and as part of a local hiking club. I also camp in Round Valley each summer in part to watch the deer grazing in the meadow in the evenings and to enjoy the quietude.

The proposed plan to move dirt around the valley, disturbing all the vegetation, is supposed to repair the effects of erosion, but erosion is a natural phenomenon. This is a wilderness area and nature should exist without interference from us. In that it is a designated wilderness area, I am opposed to using machinery (bobcats and helicopters were specified in the notice) to do work which I consider to be unnecessary. The negative impact of having a crew from the Conservation Corps camping for several weeks in such a delicate ecosystem is also of great concern.

In summary, I don't see that there is a problem and am opposed to the methods proposed for tackling it. As a concerned California taxpayer, I am not in favor of spending our nearly exhausted coffers on a project of such dubious need and value.

Thank you for taking my concerns into consideration as you decide whether to go forward with the project.

Sincerely,

Jane Udall

Jane Udall

APPENDIX F

MITIGATION MONITORING AND REPORTING PLAN

ROUND VALLEY MEADOW AND STREAM HEADCUT REPAIR AND ELEVATION RESTORATION PROJECT

Mount San Jacinto State Park

Mitigation Monitoring and Reporting Plan

July 2009

Mitigation Measure	Timing	Responsible for Implementing Mitigations	Responsible for Ensuring Implementation	Required for Task to be Complete	Date Completed	Status / Comments
MITIGATION MEASURES GEO-1	During and Following Construction	DPR Resource Staff, CCC Crews	DPR Environmental Scientist	Revegetation, seasons following end of construction		
MITIGATION MEASURES GEO-2	During Construction	DPR Resource Staff, CCC Crews	DPR Environmental Scientist	End of Construction		
MITIGATION MEASURES HAZMAT-1	Prior to and During Construction	DPR Resource Staff, CCC Crews	DPR Environmental Scientist	End of Construction		
MITIGATION MEASURES NOISE-1	During Construction	DPR Resource Staff, CCC Crews	DPR Resource Staff, CCC Crews	End of Construction		
MITIGATION MEASURES NOISE-2	During Construction	DPR Resource Staff, CCC Crews	DPR Resource Staff, CCC Crews	End of Construction		